

**Synonym**

BTN1A1,Butyrophilin,BTN

**Source**

Biotinylated Human BTN1A1, His,Avitag (BT1-H82E6) is expressed from human 293 cells (HEK293). It contains AA Ala 27 - Arg 242 (Accession # [Q13410-1](#)).

Predicted N-terminus: Ala 27

**Molecular Characterization**

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 27.6 kDa. The protein migrates as 36-40 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Biotinylation**

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

**Biotin:Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

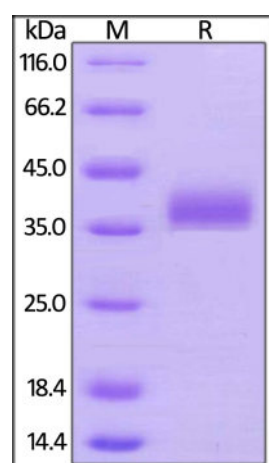
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Biotinylated Human BTN1A1, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

**Background**

Butyrophilin subfamily 1 member A1 (BTN1A1) is also known as BTN, which is a member of the immunoglobulin superfamily and the major protein associated with fat droplets in the milk. BTN1A1 may have a cell surface receptor function. The human butyrophilin gene is localized in the major histocompatibility complex

(MHC) class I region of 6p and may have arisen relatively recently in evolution by the shuffling of exons between 2 ancestral gene families. Furthermore, BTN1A1 regulates the amount of lipids and size of droplets expressed in milk and inhibits the proliferation of CD4 and CD8 T-cells activated by anti-CD3 antibodies, T-cell metabolism and IL2 and IFNG secretion.

### **Clinical and Translational Updates**

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.